

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1. (Original) A method for acquiring a public land mobile network (PLMN) of a mobile station for registering the mobile station in a cell overlapped operated by a first business operator with a cell of a base station operated by a second business operator, the method comprising the steps of:

- (i) scanning a plurality of slot synchronizations having different signal strengths using a previously set carrier frequency;
- (ii) determining whether a corresponding base station is operated based on home PLMN information included in system information in response to a slot synchronization having a strongest signal strength;
- (iii) extracting cell overlapped information from the system information when the corresponding base station is not operated based on the home PLMN, the cell overlapped information indicating that a base station is overlapped with the base station operated by the second business operator; and
- (iv) re-executing a PLMN acquisition procedure for different slot synchronizations with respect to an identical frequency based on the cell overlapped information.

Claim 2. (Original) The method as defined in claim 1, wherein the cell overlapped information includes a timing offset and a scrambling code for demodulating a PLMN overlapped with a base station in a different network, which uses the frequency of the home base station.

Claim 3. (Original) The method as defined in claim 2, wherein step (iv) further comprises directly acquiring the home PLMN using the timing offset and the scrambling code.

Claim 4. (Original) The method as defined in claim 1, wherein the cell overlapped information includes information as to whether overlapped areas are present.

Claim 5. (Original) The method as defined in claim 4, wherein step (iv) comprises:

- (iv-1) acquiring frame synchronizations of different slot synchronizations having signal strengths weaker than the strongest signal strength of the slot synchronization;
- (iv-2) extracting a scrambling code using the frame synchronizations acquired in step (iv-1); and
- (iv-3) acquiring system information provided from the home base station using the scrambling code extracted in step (iv-2).

Claim 6. (Original) The method as defined in claim 1, wherein the cell overlapped information includes number information of an overlapped PLMN.

Claim 7. (Original) The method as defined in claim 6, wherein step (iv) comprises:

- (iv-1) acquiring frame synchronizations of different slot synchronizations having signal strengths weaker than the strongest signal strength of the slot synchronization;
- (iv-2) extracting a scrambling code using the frame synchronizations acquired in step (iv-1); and
- (iv-3) acquiring system information provided from the home base station using the scrambling code extracted in step (iv-2), by a number of the PLMN.

Claim 8. (Original) The method as defined in claim 1, wherein the cell overlapped information includes identification information of a PLMN forming an overlapped cell.

Claim 9. (Original) The method as defined in claim 8, step (iv) comprises:

- (iv-1) acquiring frame synchronizations of different slot synchronizations with respect to an identical frequency having signal strengths weaker than the strongest signal strength of the slot synchronization;
- (iv-2) extracting a scrambling code using the frame synchronizations acquired in step (iv-1); and
- (iv-3) acquiring system information provided from the home base station using the scrambling code extracted in step (iv-2).

Claims 10-13 (Canceled)

Claim 14. (Original) A mobile station having a home public land mobile network (PLMN) function for registering a mobile station in a cell operated by a first business operator overlapped with a cell of a base station operated by a second business operator, the mobile station comprising:

- a controller for acquiring system information corresponding to a slot synchronization having a strongest signal strength among a plurality of acquired slot synchronizations using a previously set carrier frequency during an acquisition of the PLMN;

- extracting PLMN information from the acquired system information;

- determining whether a corresponding base station is a home PLMN based on the extracted PLMN information;

- determining whether cell overlapped information is included in the system information when the corresponding base station is not the home PLMN, wherein the cell overlapped information indicates that a base station is overlapped with the base station operated by the second business operator; and

- executing a PLMN acquisition procedure for different slot synchronizations based on the cell overlapped information.

Claim 15. (Original) The mobile station as defined in claim 14, wherein the cell overlapped information includes information as to whether overlapped areas are present, and the controller acquires frame synchronizations of different slot synchronizations having signal strengths weaker than the strongest signal strength of the slot synchronization and acquires a scrambling code based on the frame synchronizations in order to acquire system information, during the acquisition of the PLMN.

Claim 16. (Original) The mobile station as defined in claim 14, wherein the cell overlapped information includes number information of an overlapped public land mobile network, and the controller repeats the step of acquiring frame synchronizations for each slot synchronization by a number of the overlapped PLMNs among different slot synchronizations having signal strengths weaker than the strongest signal strength of the slot synchronization, and

the step of acquiring a scrambling code based on the acquired frame synchronizations in order to acquire the system information, during the acquisition of the PLMN.

Claim 17. (Original) The mobile station as defined in claim 14, wherein the cell overlapped information includes a timing offset and a scrambling code for demodulating a PLMN overlapped with a base station in a different network using the frequency of the home base station, and the controller acquires system information based on the timing offset and the scrambling code in order to directly acquire the home PLMN during the acquisition of the PLMN.

Claim 18. (Original) The mobile station as defined in claim 14, wherein the cell overlapped information includes PLMN information having frequency information of each base station forming the overlapped cell, and the controller selects a slot synchronization to which a frequency included in the PLMN information belongs, acquires a frame synchronization for the selected slot synchronization, and acquires a scrambling code based on the acquired frame synchronization in order to acquire the system information, during the acquisition of the PLMN.